**Explaining equilibrium (Level 2) examiners tips: Read these please!**

• so...firstly if a reaction goes forward it can also be termed as going to the right

• if a reaction goes backwards it is the same as saying to the left

• reactant removed - therefore reaction moves to the left (backwards) to replace lost reactant

• reactant added - therefore reaction moves to the right (forwards) to use up excess reactant

• the opposite applies to a product removed or added

• if the pressure increases (with a decrease in volume) the reaction moves to the side with less moles *(for*

*Excellence you must specific the exact number of moles on either side of the equation)*

• if the temperature INcreases the reaction proceeds towards the ENdothermic side (think ENTRANCE)...because

the endothermic side absorbs the heat energy

• a catalyst does not change the position of equilibrium as a catalyst increases the rate of both forward and reverse

reactions

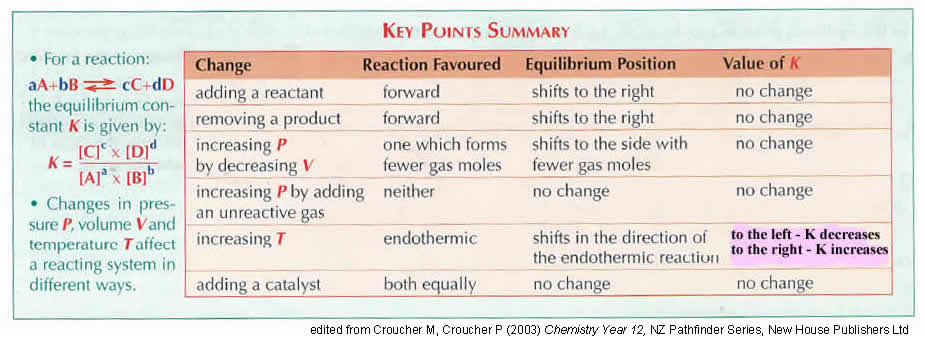
• It is important to mention Le Chatalier's Principle (aka The Equilibrium Law)"a change made to a system in

equilibrium will result in a shift of the equilibrium in a direction that minimises the change"  
• in industry, for economic reasons a compromise will be reached between percentage yield and the rate of

reaction *eg too low a temperature means too slow a rate of reaction, whereas for an exothermic reaction, too*

*low a temperature means less product formed*

• the [image below](http://chemicalminds.wikispaces.com/file/view/equilibriumsummary.pdf/447583780/equilibriumsummary.pdf) shows a summary of the key points of an equilibrium system

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#### Also…don’t be daft! repeating this one, listen carefully!!!…a temperature increase results in a reaction going to the ENDOthermic side (think ENTRANCE).... because the endothermic side ABSORBS the heat energy a change to an equilibrium system NEVER "balances it out" nor adjusts it "50/50" nor "fights it back" but OPPOSES or MINIMISES the change answer the question that is being ASKED always name SUBSTANCES, state number of MOLES of particles etc...

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